Reading test results and their interpretation are stressed because of their importance in student achievement. The Nelson-Denny Reading Test used at Harcum Junior College is a useful measuring instrument for predicting academic achievement, screening students, and diagnosing reading and learning problems. General hints for interpretation of the reading test results are presented. (CK)
TO: All Faculty and Staff  
FROM: Office of Research—
SUBJECT: Interpreting Nelson-Denny Reading Test Scores

1. As we are all aware, reading plays a vital role in student achievement of academic success. It therefore deserves very careful attention in our daily activities.

2. The Nelson-Denny Reading Test results, which you recently received, provide a very useful measure of this key academic skills area, both in terms of vocabulary knowledge and comprehension capability. It furnishes helpful, objective information for academic achievement prediction, screening and broadly diagnostic purposes.

3. Research with the Nelson-Denny indicates a close relationship between the test scores and scholastic achievement - an average correlation with academic achievement of $r = 0.67$. For such a pair-wise, linear association, the Coefficient of Determination ($r^2$) indicates the strength of association between two populations or measures of population attributes. For example, the $r$ of 0.67 between the two criterion variables of Nelson-Denny Scores and scholastic achievement means that 45% of the variations between the two criterion variables is attributable to the two criterion variables. In other words, almost half of the variation between 'high' and 'low' academic achievement is associated with 'high' and 'low' Nelson-Denny scores. This is a substantial degree of association or correlation, making Nelson-Denny scores very valuable predictors of academic success.

4. Nelson-Denny test score percentile ranks clearly reveal specific reading skills strengths and weaknesses, making it possible for a concerned faculty to guide students toward a more intelligent attack upon their reading difficulties.

5. For diagnosing individual problems, strengths, and weaknesses - the subtest scores in vocabulary and comprehension are most useful. Numerous empirical results indicate that students scoring at or below the 30th percentile, in either the verbal or comprehension scores, are 'prime candidates' for prompt remedial reading assistance.

6. All 1970 freshmen who scored at or below the 30th percentile are rostered for the Harcum Reading Development Course. Those scoring above the 30th percentile may do so on an optional basis.
7. In 1966 some 32% of the freshmen scored at or below the 30th percentile. In 1967 some 144 freshmen (or 39%) scored at or below the 30th percentile. In 1969 only 54 freshmen (or 14%) had these lower scores. Unfortunately, in 1970, some 145 freshmen (or 53%) had these lower scores.

8. The norm group to which our students are compared are some 4000 college students who were selected as a random sample from freshmen enrolled in universities, liberal arts colleges, teachers colleges, junior colleges and technical schools. Thus, if a student's vocabulary percentile rank is 85, she knows that her performance on that part of the test was better than 85% of those in the norm group of 4000.

9. Though this test is not primarily diagnostic in nature, its diagnostic usefulness should not be overlooked, for it provides a broad three-dimensional picture (vocabulary, comprehension and reading rate) of value in individualized reading instruction.

10. Suppose the percentile ranks for a student tend to be approximately the same in all three areas. Such a pattern suggests that no one of these areas is a particular problem. However, if they are "low" scores, attention to all three would seem in order in reading improvement work.

11. More often than not, a student's test profile will show one area well above or below the others. Generally speaking, the greater the deviation between sub-tests, the greater the need for follow up instruction in any area of low achievement. For example, with percentile ranks as follows: vocabulary 25th, comprehension 45th, and reading rate 50th percentile, this suggests vocabulary as a major problem. It also suggests that the student may be said to be making better than expected use of her present word power.

12. Another student may have a higher percentile rank in vocabulary than in comprehension; vocabulary 65th percentile, comprehension 40th, and reading rate 20th percentile. This suggests she has the word power to comprehend well above average (50th percentile), but that she is not using her word power with expected skill. The problem here is to discover why not, and to concentrate on the more effective application of that word power. The difficulty may be a matter of interest, motivation, concentration, background deficiency, or such things as regressing and word-by-word reading.

13. Harcum 1970 freshmen Nelson-Denny scores have been made available. All faculty and staff are urged to carefully review and study these results to help insure a more meaningful learning-guidance experience for Harcum students.

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Director of Research

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